The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On June 13, 1996, this Regional Board adopted Order No. 96-41, NPDES Permit No.CAG919002, "General Waste Discharge Requirements for Groundwater Extraction and Similar Waste Discharges From Construction and Remediation Projects to Surface Waters within the San Diego Region, Except for San Diego Bay".

2. 40 CFR 122.28 provides for the issuance of general permits to regulate discharges of waste which result from similar operations, are the same type of waste, require the same effluent limitations, require similar monitoring, and are more appropriately regulated under a general permit rather than individual permits.

3. Existing and proposed discharges of groundwater extraction waste to surface waters in the San Diego Region from construction groundwater extraction, foundation groundwater extraction, and groundwater extraction related to cleanup projects (collectively groundwater extraction waste discharges):

    a. Result from similar operations (all involve extraction and discharge of groundwater);

    b. Are the same type of wastes (all are groundwater containing or potentially containing petroleum hydrocarbons, solvents, or other pollutants);

    c. Require similar effluent limitations for the protection of the beneficial uses of similar receiving waters;

    d. Require similar monitoring; and

    e. Are more appropriately regulated under a general permit rather than individual permits.

    Discharges of extracted groundwater to San Diego Bay, are regulated under Order No. 2000-90 (NPDES No. CAG919001), *General Waste Discharge Requirements for Temporary Groundwater Extraction and Similar Waste Discharges to San Diego Bay and Storm Drains or Other Conveyance Systems Tributary Thereto*.

4. Extracted Groundwater may contain pollutants which may be found in groundwaters as a result of decomposition of organic materials (e.g., hydrogen sulfide), leaking underground storage tanks and fuel lines, surface spills, sewage, past use of liquid waste impoundments, or the potential presence of nutrients (phosphorus and nitrogen compounds).

5. The *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan), adopted on July 23, 1997, identifies beneficial uses and establishes water quality objectives, general requirements for management of waste discharged to the ocean, quality requirements for waste discharges, discharge prohibitions, and general provisions for state ocean waters to be protected. Beneficial uses of the bays and estuaries in the San Diego Region are similar to those of the Ocean Waters of the State.

6. If a lagoon or estuary is not open to the Pacific Ocean and consists of fresh water, discharges shall comply with the requirements established in this Order for discharges to inland surface waters.

7. The *Comprehensive Water Quality Control Plan Report, San Diego Basin (9)* (Basin Plan), adopted on September 8, 1994, and subsequently approved by the State Water Resources Control Board (SWRCB) on December 13, 1994, designates beneficial uses, narrative and numerical water quality objectives, and prohibitions which are applicable to the groundwater extraction waste discharges regulated under this Order. The Basin Plan contains prohibitions applicable to surface waters (see Attachment A).

8. On March 2, 2000, the SWRCB adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Policy). The Policy implements the provisions promulgated by the U.S. Environmental Protection Agency (U.S. EPA) in the California Toxics Rule (CTR). Criteria for 126 priority pollutants are established by the CTR.

9. Section 5.3 of the Policy states that, where site-specific conditions in individual water bodies or watersheds differ sufficiently from statewide conditions and those differences cannot be addressed through other provisions of this policy, the SWRCB may, in compliance with the California Environmental Quality Act (CEQA), subsequent to a public hearing, and with the concurrence of the U.S. EPA, grant an exception to meeting a priority pollutant criterion/objective or any other provision of this Policy where the SWRCB determines:

    a. The exception will not compromise protection of enclosed bay, estuarine, and inland surface waters for beneficial uses; and

    b. The public interest will be served.

10. Pursuant to Section 5.3 of the Policy, the Regional Board, after compliance with the California Environmental Quality Act (CEQA), may allow short-term or seasonal exceptions from meeting the priority pollutant criteria/objectives if determined to be necessary to implement control measures either:

    a. For resource or pest management (i.e., vector or weed control, pest eradication, or fishery management) conducted by public entities to fulfill statutory requirements, including, but not limited to, those in the California Fish and Game, Food and Agriculture, Health and Safety, and Harbors and Navigation codes; or

    b. Regarding drinking water conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code. Categorical exceptions may also be granted for draining municipal storm water conveyances for cleaning or maintenance, or for draining water treatment facilities for cleaning or maintenance.

11. On April 28, 2000, the USEPA promulgated numeric water quality criteria for priority toxic pollutants and other water quality standards provisions to be applied to waters in the State of California to protect human health and the environment. The CTR regulations, codified in 40 CFR 131.38, establish numeric criteria for water quality standards for priority toxic pollutants for the State of California.

12. In order to protect the beneficial uses of receiving waters from excessive concentrations of pollutants as a result of groundwater extraction waste discharges, this Order does not provide for a mixing zone or a

zone of initial dilution except when the discharge is to the surf zone. This Order allows initial dilution of 3 in a surf zone.

13. In order to minimize potential impacts of discharges of groundwater containing pollutants on the beneficial uses of surface waters, this Order contains effluent pollutant concentration limitations based on criteria for the protection of aquatic species, the protection of human health from consumption of aquatic organisms, maximum contaminant levels (MCL) for potable drinking water supplies, and/or best available technology economically achievable (BAT)[2] for the removal of organic pollutants commonly found in petroleum-and solvent-contaminated groundwaters.

14. Effluent limitations for volatile and base/neutral compounds are equal to the practical quantitation level (PQL) if the PQL is lower than water quality objectives for the protection of beneficial uses (such compounds will essentially be non-detectable in discharges of groundwater extraction wastes). When determining compliance based on a single sample, with a single effluent limitation which applies to a group of chemicals (e.g. PCB's) concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the Method Detection Limit (MDL) for that parameter.

15. Any discharge of untreated groundwater to a surface water may cause or contribute to excursions above narrative water quality objectives contained in the Ocean Plan and/or Basin Plan as a result of the potential discharge of petroleum related compounds, solvents, and metals.

16. Since water quality criteria for many of the petroleum hydrocarbon compounds have not been proposed or established by the SWRCB or USEPA, this Order requires monitoring of groundwater discharged to surface waters using "indicator constituents"[3] for petroleum related compounds. This Order establishes effluent limitations and monitoring requirements for BTEX and TPH which will ensure that volatile petroleum related compounds[4] will be removed from the waste stream. This Order also establishes effluent limitations and monitoring requirements for indicator constituents of diesel fuels (TPH - diesel)[5] commonly found in polluted groundwaters.

17. It has been demonstrated that volatile organic compounds (e.g., benzene, toluene, ethylbenzene, xylene, etc.) and many other organic pollutants in groundwater can be reduced to less than current analytical detection limits (0.5 to 10 micrograms per liter (μg/L) in groundwater using available standard treatment technologies[6]. Thus, best available technology economically achievable for the removal of organic compounds is the basis for effluent limitations for BTEX and other volatile hydrocarbons, and base/neutral compounds, in Discharge Specifications B.1, B.2, B.3, and B.4 of this Order.

18. In establishing effluent limitations based on BAT, the following factors were taken into consideration:

    a. The appropriate technology for the category or class of which the discharger is a member;

    b. The age of equipment and facilities involved;

    c. The process employed;

    d. The engineering aspects of the application of various types of control techniques;

    e. Process changes;

f. The cost of achieving such effluent reduction;

g. Non-water quality environmental impact (including energy requirements); and

h. Known and potential groundwater contaminants in the San Diego region.

19. The Porter-Cologne Water Quality Control Act (January 1, 2000), Section 13272.1 and Section 13285, address discharges of MTBE. The California Department of Health Services (DOHS) last update (March 9, 2000) of California's Maximum Contaminant Levels for MTBE states the following:

As established by the DOHS, the primary MCL is 13 μg/L MTBE and the secondary MCL is 5 μg/L.

20. Enrollees under this general permit that are in close proximity of the ocean, a bay, harbor, lagoon or estuary, may encounter saline groundwater, in which case the use of EPA Method 1638, and EPA Method 1640 (Clean Technologies) would be appropriate for the analysis of metals.

21. The daily maximum discharge flowrate limitation for each discharge will be specified in the discharge Enrollment Letter from the Regional Board. Mass emission rate limitations shall be determined using the discharge flowrate and effluent concentration limitations specified in Discharge Specifications B.1, B.2, B.3, and B.4, of this Order.

22. Pursuant to 40 CFR 131.12 and SWRCB Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (collectively "antidegradation policies"), the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies.

23. The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal "antidegradation" policies.

24. Discharge criteria established under Sections 301, 302, 304, 306, 307, and 403 of the Clean Water Act (CWA), as amended (33 U.S.C. 1251 ~~et seq~~.), are applicable to discharges of groundwater extraction waste.

25. This Order does not preempt or supersede the authority of other State or local agencies to prohibit, restrict, or control the discharge of groundwater extraction waste discharges from facilities subject to this permit in any manner subject to their authority. This Order does not apply to discharges regulated by a municipal stormwater permit. Discharges of groundwater via a storm drain conveyance system during dry weather has the potential to carry pollutants typically found in urban runoff (i.e.: coliform, heavy metals, pesticides, herbicides, oil & grease, petroleum products), that would normally remain in the storm drain system until the first significant rain event of the wet season, to a water of the state, thus creating a nuisance condition.

26. This Order does not apply to small dewatering sumps (utility vaults) necessary to protect public utilities (e.g., electrical, telephone, municipal, sewer pump stations, and other utilities vital to the public) and which have intermittent discharges. Utility vault discharges are regulated by State Water Resources Control Board General NPDES Permit No. 96-12-DWQ.

27. Pursuant to Section 402 of the CWA, and amendments thereto, this Order shall serve as a general NPDES permit for groundwater extraction waste discharges to surface waters, other than San Diego Bay, within the San Diego Region for those so authorized[7] by the Regional Board.

28. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:

    a. Beneficial uses to be protected and the quality objectives reasonably required for that purpose;

    b. Other waste discharges;

    c. The need to prevent nuisance;

    d. Past, present, and probable future beneficial uses of the waters under consideration;

    e. Environmental characteristics of the waters under consideration;

    f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;

    g. Economic considerations;

    h. The need for developing housing within the region;

    i. The need to develop and use recycled water.

29. The issuance of this general permit for the discharge of groundwater extraction waste to surface waters in the San Diego Region is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (Public Resource Code, Division 13, Chapter 3, Section 21000 ~~et seq.~~) in accordance with the California Water Code, Section 13389.

30. The Regional Board has notified all known interested parties of its intent to reissue a general NPDES permit for the discharge of groundwater extraction waste to surface waters in the region.

31. The Regional Board has, at a public meeting, heard and considered all comments pertaining to the discharge of groundwater extraction waste to surface waters in the region.

32. All groundwater extraction waste discharges currently regulated by Regional Board Order No. 96-41 shall be regulated under the terms and conditions of this Order.

IT IS HEREBY ORDERED, that each authorized discharger (hereinafter Enrollee), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of groundwater to surface waters is prohibited unless authorized, exempted, or issued an individual NPDES permit by the Regional Board.

2. The discharge of wastes to areas designated by the SWRCB, and recommended by the Regional Board, as areas of special biological significance is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

3. The addition of pollutants to extracted groundwater to be discharged to surface waters is prohibited. The only exception to this prohibition is that chemicals (i.e.: chlorine) may be added to extracted groundwater to control biofouling in treatment systems, provided that extracted groundwater discharged to surface waters meets the effluent limitations for such chemicals established by this Order and in the discharge Enrollment Letter issued by the Regional Board.

4. The discharge of groundwater extraction waste to surface waters from permanent[a] groundwater extraction operations in basins with designated beneficial uses of industrial, agricultural, or municipal and domestic supply are prohibited unless such extracted groundwater (not used beneficially) is used beneficially (*Application Requirements*, Section F.17, and F.18). If the Enrollee of such extracted groundwater wishes to discharge to surface waters, it shall be the responsibility of the Enrollee to obtain an individual NPDES Permit for the discharge.

5. The discharge of groundwater extraction waste to enclosed bays[1], harbors, lagoons, and estuaries, or tributaries thereto, is prohibited unless the Enrollee demonstrates to the satisfaction of the Regional Board that alternative disposal sites (e.g., surf zone) are not practicable as required in *Application Requirements,* Sections F.17, and F.18.

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[a] This prohibition does not apply to small dewatering sumps, necessary to protect public utilities (e.g., electrical, telephone, municipal sewer pumping stations, and other utilities vital to the public), and which have intermittent discharges. These discharges will be regulated, where necessary, under separate NPDES permits.

"Permanent" groundwater extraction operations shall refer to extraction operations for structures which 1) are not designed or constructed to withstand hydrostatic pressure or do not preclude infiltration of groundwater, and, 2) require removal of groundwater to prevent water infiltration to the structure(s). For purposes of this Order, "new permanent" groundwater extraction operations refers to extraction operations which are initiated after the date of adoption of this Order in cases in which the following conditions apply:

1. If the project proponent has not submitted a complete Report of Waste Discharge (RWD) to the Regional Board for a proposed discharge of extraction operation prior to adoption of this Order, the discharge is considered a discharge from a new permanent groundwater extraction operation and is prohibited unless the groundwaters are used beneficially, unless:

2. Prior to adoption of this Order, the project proponent has applied for the necessary building permits from the proper agencies.

6. The discharge of groundwater extraction waste to any surface water from a groundwater extraction project after the date of completion of construction of structures requiring groundwater extraction, or from a groundwater remediation operation after the date the groundwater has been remediated to the satisfaction of the Regional Board, is prohibited.

7. The discharge of groundwater in excess of the flowrate specified in each Enrollee's Enrollment Letter is prohibited unless the Enrollee obtains a revised discharge Enrollment Letter authorizing an increased flowrate.

8. No individual pesticide or combination of pesticides shall be present in the water column, sediments, or biota at concentration(s) that adversely affect beneficial uses. Pesticides shall not be present at levels which will bioaccumulate in aquatic organisms to levels which are harmful to human health, wildlife or aquatic organisms.

   Water designated for use as domestic or municipal[21] supply (MUN) (drinking water) shall not contain concentrations of pesticides in excess of the maximum contaminant levels specified in California Code of Regulations, Title 22, Table 64444-A of Section 64444 (Organic Chemicals). (See Basin Plan Chapter 3-13).

9. Compliance with the waste discharge prohibitions contained in the Basin Plan and listed in Attachment A hereto is a condition of this Order.

10. Compliance with Discharge Prohibitions as stated in the 1974 Bays and Estuaries Policy (Attachment C) is required as a condition of this Order.

11. The discharge of groundwater extraction waste to a stormwater conveyance system without notifying and receiving authorization from the agency having jurisdiction over the stormwater conveyance system is prohibited.

12. The discharge of wastes tributary or directly to areas designated as being of special biological significance by the SWRCB is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

B. DISCHARGE SPECIFICATIONS[8]

1. DISCHARGES TO BAYS AND HARBORS

The discharge of groundwater extraction waste to Mission Bay, Oceanside Harbor, Del Mar Boat Basin, or Dana Point Harbor shall not contain pollutants in excess of the following effluent limitations:

Constituent	Unit	6-Month Median	AMEL[36]	Daily Maximum	Instantaneous Maximum	Basis[9]
Settleable Solids	ml/L	---	1	---	0.2	BPJ[10]
Total Suspended Solids	mg/L	---	30	---	50	"
Hydrogen Sulfide	µg/L	---	2	4	10	BPJ[10]

Constituent	Unit	6-Month Median	AMEL[36]	Daily Maximum	Instantaneous Maximum	Basis[9]
Total Residual Chlorine (TRC)[12]	µg/L	2	---	8	60	OP[11]
Ammonia (as nitrogen)	µg/L	600	---	2,400	6,000	"
pH	Units	Within the limits of 6.0 to 9.0 at all times.				OP[11]
Xylene	µg/L	---	---	---	5	BPJ/BAT[13]
Total Petroleum Hydrocarbons	mg/L	---	---	---	0.5	BPJ/BAT[13]
Phenolic Compounds (Non-chlorinated)	µg/L	30	---	120	300	BPJ/BAT[13]
Chlorinated Phenolics	µg/L	1	---	4	10	"
Endosulfan	ng/L	9	---	18	27	OP[11]
HCH[29]	ng/L	4	---	8	12	"
Tributyltin	µg/L	---	0.005	---	---	OP[11]
Dichloromethane	µg/L	---	---	---	5	"
Halomethanes	µg/L	---	---	---	5	BPJ/BAT[13]
PAHs	ng/L	---	8.8	---	---	"
TCDD Equivalents	pg/L	---	0.004	---	---	OP[11]
Acute Toxicity	TUa	---	---	---	0.59	BPJ[10]
Chronic Toxicity	TUc	---	---	1	---	OP[11]
Base/Neutrals[16]	µg/L	---	---	---	10	BPJ/BAT[13]
Dissolved Oxygen	mg/L	Shall not be less than 5 at anytime.				BPJ[10]
Turbidity	NTU	Shall not exceed the turbidity of the receiving water.				
Total Coliform	MPN/100mL	---	---	---	1000	BPJ/BAT[13]
Fecal Coliform	MPN/100mL	---	---	---	200	BPJ/BAT[13]
126 Priority Pollutants (Including metals)*	40 CFR 131.38 - Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California.					Attachment D

Note: ml/L = milliliters per liter; mg/L = milligrams per liter; µg/L = micrograms per liter; ng/L = nanograms per liter; pg/L = picograms per liter; TUa = acute toxicity units; TUc = chronic toxicity units; NTU = Nephelometric Turbidity Units

***** Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. Values displayed in the matrix correspond to a total hardness of 100 mg/L.

2. DISCHARGES TO LAGOONS/ESTUARIES

The discharge of groundwater extraction waste discharges to saline[17] lagoons (only Buena Vista Lagoon is fresh water) and estuaries of the region shall not contain pollutants in excess of the following effluent limitations:

Constituent	Unit	6-Month Median	AMEL[36]	Daily Maximum	Instantaneous Maximum	Basis
Total Nitrogen[18]	mg/L	1.0			2.0	BPJ[10]
Total Phosphorus[18]	mg/L	0.1			0.2	"
Settleable Solids	ml/L	---	0.1	---	50	BPJ[10]
Hydrogen Sulfide	µg/L	---	2	4	10	"
Total Residual Chlorine (TRC)[12]	µg/L	2	---	8	60	OP[11]
Ammonia (as nitrogen)	µg/L	600	---	2,400	6,000	"
pH	Units	Within the limits of 7.0 to 8.5 at all times.				"
Xylene	µg/L	---	---	---	5	"

Constituent	Unit	6-Month Median	AMEL[36]	Daily Maximum	Instantaneous Maximum	Basis
Total Petroleum Hydrocarbons	mg/L	---	---	---	0.5	OP[11]
Phenolic Compounds (Non-chlorinated)	µg/L	30	---	120	300	"
Chlorinated Phenolics	µg/L	1	---	4	10	"
Tributyltin	µg/L	---	0.005	---	---	OP[11]
Acute Toxicity	TUa	---	---	---	0.59	BPJ[10]
Chronic Toxicity	TUc	---	---	1	---	OP[11]
Base/Neutrals[16]	µg/L	---	---	---	10	" "
Dissolved Oxygen	mg/L	Shall not be less than 5 at anytime.				BPJ[10]
Turbidity	NTU	Shall not exceed the turbidity of the receiving water.				"
Total Coliform	MPN/100mL	---	---	---	1000	BPJ[10]
Fecal Coliform	MPN/100mL	---	---	---	200	"
126 Priority Pollutants (Including metals)*	40 CFR 131.38 - Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California.					Attachment D

Note: ml/L = milliliters per liter mg/L = milligrams per liter µg/L = micrograms per liter ng/L = nanograms per liter
pg/L = picograms per liter TUa = acute toxicity units TUc = chronic toxicity units NTU = Nephelometric Turbidity Units

* Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. Values displayed in the matrix correspond to a total hardness of 100 mg/L.

3. DISCHARGES TO THE SURF ZONE[20]

The discharge of groundwater extraction waste to the surf zone (3:1 dilution factor) shall not contain pollutants in excess of the following effluent limitations:

Constituent	Unit	6-Month Median	30-Day Average[37]	Daily Maximum	Instantaneous Maximum	Basis[9]
Settleable Solids	ml/L	---	1	---	2	BPJ[10]
Total Suspended Solids	mg/L	---	60	---	100	"
Total Residual Chlorine[12]	µg/L	8	---	32	240	OP[11]
Ammonia (as nitrogen)	µg/l	2400	---	9600	24000	OP[11]
pH	units	Within the limits of 6.0 to 9.0 at all times.				OP[11]
Benzene	µg/L	---	---	---	5	BPJ/BAT[13]
Ethylbenzene	µg/L	---	---	---	5	BPJ/BAT[13]
Toluene	µg/L	---	---	---	5	" "
Xylene	µg/L	---	---	---	5	" "
Total Petroleum Hydrocarbons	mg/L	---	---	---	0.5	" "
Arsenic	µg/L	23	---	119	311	OP[11]
Cadmium	µg/L	4	---	16	40	"
Chromium (hexavalent)[14]	µg/L	8	---	32	80	"
Copper	µg/L	6	---	42	114	"
Lead	µg/L	8	---	32	80	"
Mercury	µg/L	0.16	---	0.64	1.6	"
Nickel	µg/L	20	---	80	200	OP[11]
Silver	µg/L	2.32	---	10.7	28	"
Zinc	µg/L	56	---	296	776	"
Cyanide	µg/L	4	---	16	40	"

Constituent	Unit	6-Month Median	30-Day Average[37]	Daily Maximum	Instantaneous Maximum	Basis[9]
Phenolic Compounds (Non-chlorinated)	µg/L	120	---	480	1200	OP[11]
Chlorinated Phenolics	µg/L	4	---	16	40	"
1,1,2,2-tetrachloroethane	µg/L	---	---	---	5	BPJ/BAT[13]
Tributyltin	ng/L	---	5.6	---	---	OP[11]
1,1,1-trichloroethane	µg/L	---	---	---	5.0	BPJ/BAT[13]
1,1,2-trichloroethane	µg/L	---	---	---	5.0	" "
Carbon tetrachloride	µg/L	---	3.6	---	---	OP[11]
PCBs[15]	ng/L	---	0.076	---	---	OP[11]
Tetrachloroethylene	µg/L	---	---	---	5	BPJ/BAT[13]
Trichloroethylene	µg/L	---	---	---	5	"
Vinyl chloride	µg/L	---	---	---	5	"
Acute Toxicity	TUa	---	1.5	---	2.5	OP[11]
Chronic Toxicity	TUc	---	---	1	---	"
Base/Neutrals[16]	µg/L	---	---	---	10	BPJ/BAT[13]
Dissolved Oxygen	mg/L	Shall not be less than 5.0 at any time.				BPJ[10]
Turbidity	NTU	Shall not exceed the turbidity of waters outside of the surf zone.				
Total Coliform	MPN/100Ml	---	---	---	1000	"
Fecal Coliform	MPN/100mL	---	---	---	200	"
Selenium	µg/L	60	---	240	600	OP[11]
Endosulfan	ng/L	36	---	72	108	"
Endrin	ng/L	8	---	16	24	"
HCH[29]	ng/L	16	---	32	48	OP[11]
Acrolein	µg/L	---	---	---	10	BPJ/BAT[13]
Antimony	mg/L	---	4.8	---	---	OP[11]
bis(2-chloroethoxy) methane	µg/L	---	---	---	10	BPJ/BAT[13]
bis(2-chloroisopropyl) ether	µg/L	---	---	---	10	" "
Chlorobenzene	µg/L	---	---	---	5	BPJ/BAT[13]
Di-n-butyl phthalate	µg/L	---	---	---	10	" "
Dichlorobenzenes[30]	µg/L	---	---	---	10.0	" "
1,1-dichloroethylene	µg/L	---	---	---	5	" "
Diethyl phthalate	µg/L	---	---	---	10	" "
Dimethyl phthalate	µg/L	---	---	---	10	" "
4,6-dinitro-2-methylphenol	µg/L	---	---	---	10	" "
2,4-dinitrophenol	µg/L	---	---	---	10	" "
Fluoranthene	µg/L	---	---	---	10	" "
Hexachlorocyclopentadiene	µg/L	---	---	---	10	" "
Isophorone	µg/L	---	---	---	10	" "
Nitrobenzene	µg/L	---	---	---	10	" "
Thallium	µg/L	---	56	---	---	OP[11]
Acrylonitrile	µg/L	---	0.40	---	---	"
Aldrin	ng/L	---	0.09	---	---	"
Benzidine	ng/L	---	0.28	---	---	"
Beryllium	ng/L	---	132	---	---	"
bis(2-chloroethyl) ether	µg/L	---	0.18	---	---	"
bis(2-ethylhexyl) phthalate	µg/L	---	---	---	10	BPJ/BAT[13]
Chlordane[31]	ng/L	---	0.09	---	---	OP[11]

Constituent	Unit	6-Month Median	30-Day Average[37]	Daily Maximum	Instantaneous Maximum	Basis[9]
Chloroform	mg/L	---	0.52	---	---	OP
DDT[32]	µg/L	---	---	---	10	BPJ/BAT[13]
3,3-dichlorobenzidine	ng/L	---	32.4	---	---	OP[11]
1,2-dichloroethane	µg/L	---	---	---	5	BPJ/BAT[13]
Dichloromethane	µg/L	---	---	---	10	" "
1,3-dichloropropene	µg/L	---	---	---	5	" "
Dieldrin	ng/L	---	0.16	---	---	OP[11]
2,4-dinitrotoluene	µg/L	---	10.4	---	---	OP[11]
1,2-diphenylhydrazine	µg/L	---	0.64	---	---	"
Halomethanes[33]	µg/L	---	---	---	5	BPJ/BAT[13]
Heptachlor[34]	ng/L	---	2.88	---	---	OP[11]
Hexachlorobenzene	ng/L	---	0.84	---	---	"
Hexachlorobutadiene	µg/L	---	---	---	5	BPJ/BAT[13]
Hexachloroethane	µg/L	---	10.0	---	---	OP[11]
N-nitrosodimethylamine	µg/L	---	29.2	---	---	"
N-nitrosodiphenylamine	µg/L	---	10.0	---	---	"
PAHs[35]	ng/L	---	35.2	---	---	OP[11]
TCDD equivalents	pg/L	---	0.015	---	---	"
Toxaphene	ng/L	---	0.84	---	---	OP[11]
2,4,6-trichlorophenol	µg/L	---	1.16	---	---	"

Note: ml/L = milliliters per liter mg/L = milligrams per liter µg/L = micrograms per liter ng/L = nanograms per liter
pg/L = picograms per liter TUa = acute toxicity units TUc = chronic toxicity units NTU = Nephelometric Turbidity Units

4. DISCHARGES TO INLAND SURFACE WATERS[a]

The discharge of groundwater extraction waste to inland surface waters (including Buena Vista Lagoon) shall not contain pollutants in excess of the following effluent limitations:

GENERAL CONSTITUENTS

Constituent	Unit	AMEL[36]	Daily Maximum	Instantaneous Maximum	Basis[9]
Settleable Solids	ml/L	0.1	---	0.2	BPJ[10]
Total Suspended Solids	mg/L	30	---	50	"
Percent Sodium	%	---	---	60	BPJ[10]
Total Nitrogen[18]	mg/L	1.0		2.0	"
Total Phosphorus[18]	mg/L	0.1		0.2	"
Methylene Blue Active Substances	mg/L	---	---	0.5	BP[19]
Turbidity	NTU	Shall not exceed the ambient turbidity of the surface water at any time.			BPJ[10]
Fluoride	mg/L	---	---	1.0	BP[19]

[a] If the groundwater extraction waste is discharged to an inland surface water tributary to a bay, harbor, lagoon or estuary and the effluent concentration limitation for discharges to bays and harbors or lagoons and estuaries is more stringent than the effluent concentration limitation for discharges to inland surface waters, the discharge shall not contain pollutants in excess of the effluent concentration limitation for a discharge to bays and harbors or lagoons and estuaries. (The discharge shall comply with the more stringent of the two effluent pollutant concentration limitations.)

Constituent	Unit	AMEL[36]	Daily Maximum	Instantaneous Maximum	Basis[9]
Hydrogen Sulfide	µg/L	2	4	10	BPJ[10]
Total Residual Chlorine (TRC)[12]	µg/L	2	8	10	"
pH	Units	Within the limits of 6.5 and 8.5 at all times.			BP[19]
Acute Toxicity	TUa	---	---	0.59	BPJ[10]
Chronic Toxicity	TUc	---	1	---	"
Dissolved Oxygen	mg/L	Shall not be less than 5.0 at any time in waters with designated warm fresh-water habitat beneficial uses or less than 6.0 in waters with cold fresh water habitat beneficial uses.			BP[19]
Total Coliform	MPN/100mL	---	---	1000	"
Fecal Coliform	MPN/100mL	---	---	200	"

Note: ml/L = milliliters per liter mg/L = milligrams per liter µg/L = micrograms per liter ng/L = nanograms per liter
pg/L = picograms per liter TUa = acute toxicity units TUc = chronic toxicity units NTU = Nephelometric Turbidity Units

***** Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. Values displayed in the matrix correspond to a total hardness of 100 mg/L.

VOLATILES, METALS, PRIORITY POLLUTANTS:

Beneficial Use:	Municipal[21]/Potable Supply			Non-municipal/Non-potable		
Constituent	Unit	Instantaneous Maximum[4]	Basis[5]	Unit	Instantaneous Maximum[4]	Basis[5]
Dibromochloropropane	µg/L	0.2	DOHS[22]	µg/L	0.2	BPJ[6]
Ethylene Dibromide	µg/L	0.02	DOHS[22]	µg/L	0.02	BPJ[6]
Xylene	µg/L	5	BPJ/BAT[10]	µg/L	5	BPJ[6]
Chlorinated Phenolics	µg/L	1	DOHS[22]	µg/L	10	BPJ/BAT[10]
Remaining Base/Neutral Compounds[16]	µg/L	10	BPJ/BAT[10]	µg/L	10	BPJ/BAT[10]
Total Petroleum Hydrocarbons	mg/L	0.5	"	mg/L	0.5	"
Iron**	mg/L	0.3	"	mg/L	0.3	"
Manganese**	mg/L	0.05	"	mg/L	0.05	"
MTBE[***,38]	µg/L	5	DOHS[22]			
126 Priority Pollutants (Including metals)*	40 CFR 131.38 - Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California.					Attachment D

Note: ml/L = milliliters per liter mg/L = milligrams per liter µg/L = micrograms per liter TUa = acute toxicity units
TUc = chronic toxicity units

***** Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. Values displayed in the matrix correspond to a total hardness of 100 mg/L.

** For the Mission San Diego (7.11) and Sycamore Canyon (7.12) Hydrographic Subareas, the effluent limitation for iron shall be 1.0 mg/L and the effluent limitation for manganese shall be 1.0 mg/L. Sycamore Canyon Subarea, a portion of the Santee Hydrologic Subarea, includes the watersheds of the following north-south trending canyons: Oak Creek, Spring Canyon, Little Sycamore Canyon, Quail Canyon, and Sycamore Canyon. The Sycamore Canyon Subarea extends eastward from the Mission San Diego HSA to the confluence of the San Diego River and Forester Creek, immediately south of the Santee Lakes.

*** The primary MCL of 13 µg/L is for the protection of human health, the secondary MCL of 5 µg/L is for aesthetic qualities of drinking water (taste and odor). The secondary MCL of 5 µg/L will be used in this Order, and only applies to discharges to receiving waters designated as Municipal/Potable Supply.

5. Groundwater extraction waste discharged to surface waters must be essentially free of:

   a. Material that is floatable or will become floatable upon discharge.

   b. Settleable material or substances that form sediments which degrade[23] benthic communities or other aquatic life.

   c. Substances which will accumulate to toxic levels in aquatic sediments or biota.

   d. Substances that significantly[24] decrease the natural light to benthic communities and other aquatic life.

   e. Materials that result in aesthetically undesirable discoloration of surface waters.

6. Groundwater extraction waste discharged to surface waters shall not cause natural water quality conditions to be altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.

7. Groundwater extraction waste discharged to surface waters shall be discharged in such a manner as to provide maximum protection to aquatic environments.

8. Groundwater extraction waste that contains pathogenic organisms or viruses shall be discharged a sufficient distance from shellfishing and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard shall be used.

9. The Enrollee shall comply with all items of the " 40 CFR Standard Provisions References" that are part of this Order (Attachment B).

C. RECEIVING WATER LIMITATIONS[25]

The discharge of extracted groundwater from any site shall not, separately or jointly with any other discharge, cause violations of the following water quality objectives in surface waters:

1. Bacterial Characteristics of Marine Waters (Surf Zone) Including Bays, Harbor, Lagoons and Estuaries

(a) Water-Contact Standards

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water-contact sports, as determined by the Regional Board, but including all Kelp Beds[26], the following bacterial objectives shall be maintained throughout the water column:

1. Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any consecutive 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample, when verified by a repeat sample taken within 48 hours, shall exceed 10,000 per 100 ml (100 per ml).

2. The fecal coliform density based on a minimum of not less than five samples for any consecutive 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any consecutive 60-day period exceed 400 per 100 ml.

   The "Initial Dilution[27] Zone" of wastewater outfalls shall be excluded from designation as "Kelp Beds" for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g. outfall pipes and diffusers) do not constitute Kelp Beds for purposes of bacterial standards.

(b) Shellfish Harvesting Standards[28]

At all areas where shellfish may be harvested for human consumption (SHELL), the following bacterial objectives shall be maintained throughout the water column:

The median total coliform density shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 320 per 100 ml.

2. Bacterial Characteristics of Inland Surface Waters (fresh)

(a) Water-Contact and Non-Contact Standards

In waters designated for contact recreation (REC1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 per 100 ml, nor shall more than 10 percent of total samples taken during any consecutive 30-day period exceed 400 per 100 ml.

In waters designated for noncontact recreation (REC2), and not designated for contact recreation (REC1), the average fecal coliform concentration for any 30-day period, shall not exceed 2,000 per 100 ml nor, shall more than 10 percent of samples collected during any consecutive 30-day period exceed 4,000 per 100 ml.

(b) Shellfish[28]

At all areas where shellfish may be harvested for human consumption, the median total coliform concentration for any 30-day period shall not exceed 70 per 100 ml, nor shall more than 10 percent of the samples collected during any consecutive 30-day period exceed 230 per 100 ml for a five-tube decimal dilution test or 330 per 100 ml when a three-tube decimal dilution test is used.

(c) In bays and estuaries, the most probable number of coliform organisms in the upper 60 feet of the water column shall be less than 1,000 per 100 ml provided that not more than 20 percent of the samples at any sampling station, in any consecutive 30-day period, may exceed 1,000 per 100 ml, and provided further that no single sample, when verified by a repeat sample taken within 48 hours, shall exceed 10,000 per 100 ml. A verification sample will be required within 48 hours.

3. Physical Characteristics

(a) Floating particulates and grease and oil shall not be visible.

(b) The discharge of waste shall not cause aesthetically undesirable discoloration of the surface water.

(c) Natural light shall not be significantly[24] reduced at any point outside the zone of initial dilution.

(d) The rate of deposition of solids and the characteristics of inert solids in receiving water sediments shall not be changed such that benthic communities are degraded[23].

(e) Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

4. Chemical Characteristics

(a). The dissolved oxygen concentration of ocean waters shall not at any time be depressed more than 10 percent from that which occurs naturally as a result of the discharge of oxygen demanding waste materials. In bays and lagoons, the annual mean dissolved oxygen concentration shall not be less than 7.0 mg/L, nor shall the minimum dissolved oxygen concentration be reduced below 5.0 mg/L at any time. In inland surface waters, the annual mean dissolved oxygen concentration shall not be less than 5 mg/L more than 10 percent of the time.

(b). The pH shall not be changed at any time more than 0.2 units from that which occurs naturally in marine or saline waters, nor 0.5 units in inland surface waters designated cold or warm fresh water habitat. In bays and estuaries, the pH shall not be depressed below 7.0 nor raised above 8.5. In inland surface waters the pH shall not be depressed below 6.5 nor raised above 8.5.

(c). The dissolved sulfide concentration of waters in and near sediments and throughout the water column shall not be significantly[24] increased above that present under natural conditions.

(d). The concentration of substances set forth in Chapter IV, Table B, of the Ocean Plan, in marine sediments shall not be increased to levels which would degrade[23] indigenous biota.

(e). The concentration of organic materials in receiving water sediments shall not be increased to levels which would degrade[23] aquatic life.

(f). Nutrient materials shall not cause objectionable aquatic growth or degrade[23] indigenous biota.

5. Biological Characteristics

(a) Aquatic communities, including vertebrate, invertebrate, and plant species, shall not be degraded[23].

(b) The natural taste, odor, and color of fish, shellfish[28], or other aquatic resources used for human consumption shall not be altered.

(c) The concentration of organic materials in fish, shellfish or other aquatic resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

6. Radioactivity

Discharges of radioactive waste shall not degrade[23] aquatic life.

7. Toxic Materials Limitations for Marine Waters (Surf Zone) Ocean Plan, 1997

OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE

Chemical	Units of Measurement	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	µg/L	8	32	80
Cadmium	µg/L	1	4	10
Chromium (Hexavalent)[14]	µg/L	2	8	20
Copper	µg/L	3	12	30
Lead	µg/L	2	8	20
Mercury	µg/L	0.04	0.16	0.4
Nickel	µg/L	5	20	50
Selenium	µg/L	15	60	150
Silver	µg/L	0.7	2.8	7
Zinc	µg/L	20	80	200
Cyanide	µg/L	1	4	10
Total Chlorine Residual[12]	µg/L	2	8	60
Ammonia (as nitrogen)	µg/L	600	2400	6000
Chronic Toxicity	TUc		1	
Phenolic Compounds (Non-chlorinated)	µg/L	30	120	300
Chlorinated Phenolics	µg/L	1	4	10
Endosulfan	ng/L	9	18	27
Endrin	ng/L	2	4	6

Chemical	Units of Measurement	6-Month Median	Daily Maximum	Instantaneous Maximum
HCH[29]	ng/L	4	8	12
Radioactivity	Not to exceed limits specified in Title 17, Chapter 15, Subchapter 4, Group 3, Article 3, Section 30269 of the California Code of Regulations.			

OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- NONCARCINOGENS

Chemical	Units of Measurement	30-day Averages
Acrolein	µg/L	220
Antimony	mg/L	1.2
bis(2-chloroethoxy) methane	µg/L	4.4
bis(2-chloroisopropyl) ether	mg/L	1.2
Chlorobenzene	µg/L	570
Chromium (III)	mg/L	190
Di-n-butyl phthalate	mg/L	3.5
Dichlorobenzenes[30]	mg/L	5.1
1,1-dichloroethylene	mg/L	7.1
Diethyl phthalate	mg/L	33
Dimethyl phthalate	mg/L	820
4,6-dinitro-2-methylphenol	µg/L	220
2,4-dinitrophenol	µg/L	4.0
Ethylbenzene	mg/L	4.1
Fluoranthene	µg/L	15
Hexachlorocyclopentadiene	µg/L	58
Isophorone	mg/L	150
Nitrobenzene	µg/L	4.9
Thallium	µg/L	14
Toluene	mg/L	85
1,1,2,2-tetrachloroethane	mg/L	1.2
Tributyltin	ng/L	1.4
1,1,1-trichloroethane	mg/L	540
1,1,2-trichloroethane	mg/L	43

OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- CARCINOGENS

Chemical	Units of Measurement	30-day Average
Acrylonitrile	µg/L	0.1
Aldrin	ng/L	0.022
Benzene	µg/L	5.9
Benzidine	ng/L	0.069
Beryllium	ng/L	33
bis(2-chloroethyl) ether	µg/L	0.045
bis(2-ethylhexyl) phthalate	µg/L	3.5
Carbon tetrachloride	µg/L	0.9
Chlordane[31]	ng/L	0.023
Chloroform	mg/L	0.13
DDT[32]	ng/L	0.17

Chemical	Units of Measurement	30-day Average
1,4-dichlorobenzene	µg/L	18
3,3-dichlorobenzidine	ng/L	8.1
1,2-dichloroethane	mg/L	0.13
Dichloromethane	mg/L	0.45
1,3-dichloropropene	µg/L	8.9
Dieldrin	ng/L	0.04
2,4-dinitrotoluene	µg/L	2.6
1,2-diphenylhydrazine	µg/L	0.16
Halomethanes[33]	mg/L	0.13
Heptachlor[34]	ng/L	0.72
Hexachlorobenzene	ng/L	0.21
Hexachlorobutadiene	µg/L	14
Hexachloroethane	µg/L	2.5
N-nitrosodimethylamine	µg/L	7.3
N-nitrosodiphenylamine	µg/L	2.5
PAHs[35]	ng/L	8.8
PCBs[15]	ng/L	0.019
TCDD equivalents	pg/L	0.0039
Tetrachloroethylene	µg/L	99
Toxaphene	ng/L	0.21
Trichloroethylene	µg/L	27
2,4,6-trichlorophenol	µg/L	0.29
Vinyl chloride	µg/L	36

8. Toxic Materials Limitations and Objectives for Inland Surface Waters (Fresh)

(a) Discharges of extracted groundwater shall not cause violations of surface water quality objectives presented by hydrographic subunit and subarea in Table 3-2 of the Comprehensive Water Quality Control Plan Report, San Diego Basin (9), as amended.

(b) Discharges of extracted groundwater shall not cause violations of the following objectives in inland surface waters:

1. No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

2. For the protection of public health and aquatic species, waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of toxics in excess of the maximum contaminant levels for contaminants set forth in the California Code of Regulations, Title 22, as amended, or water quality objectives listed in 40 CFR 131.38 (Attachment D), for the protection of aquatic species and protection of human health, whichever concentration for a specific chemical is less. Current maximum contaminant levels for the protection of human health from the ingestion of water are as follows:

	Constituent	Title22 Maximum Contaminant Level (mg/L)
a. Inorganic	Aluminum	1
	Arsenic	0.05
	Barium	1
	Cadmium	0.01
	Chromium	0.05
	Lead	0.05
	Mercury	0.002
	Nitrate	45
	Selenium	0.01
	Silver	0.05
b. Organic	Atrazine	0.003
	Bentazon	0.018
	Benzene	0.001
	Carbon Tetrachloride	0.0005
	2,4-D	0.1
	Dibromochloropropane	0.0002
	1,4-Dichlorobenzene	0.005
	1,2-Dichloroethane	0.0005
	1,1-Dichloroethylene	0.006
	1,3-Dichloropropene	0.0005
	Endrin	0.0002
	Ethyl Benzene	0.68
	Ethylene Dibromide	0.00002
	Lindane	0.004
	Methoxychlor	0.1
	Molinate	0.02
	Monochlorobenzene	0.03
	Simazine	0.01
	1,1,2,2-Tetrachloroethane	0.001
	Tetrachloroethylene	0.005
	Thiobencarb	0.07
	Toxaphene	0.005
	2,4,5-TP Silvex	0.01
	1,1,1-Trichloroethane	0.2
	1,1,2-Trichloroethane	0.032
	Trichloroethylene	0.005
	Vinyl Chloride	0.0005
	Xylenes (Single or sum of isomers)	1.75

9. Mineral Objectives for Inland Surface Waters (fresh):

Hydrographic Unit	**Objective (mg/L)**			
	TDS	**Chloride**	**Sulfate**	**Boron**
San Juan Unit				
1.10	1000	400	500	0.75
1.20,1.30,1.40,1.50	500	250	250	0.75

Hydrographic Unit	Objective (mg/L)			
	TDS	**Chloride**	**Sulfate**	**Boron**
Santa Margarita Unit				
2.20,2.40,2.50,2.60	500	250	250	0.75
2.70,2.80,2.90,2.10,2.30	750	300	300	0.75
San Luis Rey Unit				
3.10,3.20,3.30	500	250	250	0.75
Carlsbad Unit				
4.10,4.40				
4.20,4.30,4.50,4.60	500	250	250	0.75
San Dieguito Unit				
5.10,5.20,5.30,5.40, 5.50	500	250	250	0.75
Penasquitos Unit				
6.10,6.20,6.40	500	250	250	0.75
6.30,6.50	---	---	---	---
San Diego Unit				
7.10	1000	400	500	1.0
7.11	1500	400	500	1.0
7.12c/d,	1000/1500	400	500	1.0
7.20,7.30,7.40	300	50	65	1.0
Coronado Unit				
10.10	NA	NA	NA	NA
Sweetwater River Unit				
9.10	1500	500	500	0.75
9.20,9.30	500	250	250	0.75
Otay Unit				
10.20	1000	400	500	0.75
10.30	500	250	250	0.75
Tijuana Unit				
11.11	2100	NA	NA	NA
11.20,11.30,11.40,11.50				
11.60,11.70,11.80	500	250	250	1.0

10. Waters designated for use as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.

11. Radioactivity: Discharges of radioactive waste shall not degrade marine life.

D. ELIGIBILITY

1. This Order is applicable to existing and future discharges of extracted groundwater to surface waters resulting from construction, groundwater remediation, and active and passive foundation groundwater extraction projects and activities that are greater than 100,000 gpd, and those less than 100,000 gpd that contain pollutants. Examples of passive foundation groundwater extraction systems are footing drains, slope drains, subterranean drains, french drains, weep holes, or other passive groundwater drainage systems.

2. This Order establishes a general permit for groundwater extraction waste discharges (discharges of groundwater) to all surface waters, other than San Diego Bay under the jurisdiction of this Regional Board. This Order applies to:

   a. All groundwater extraction waste discharges (discharges of groundwater) of greater than 100,000 gallons per day (GPD); and

   b. Groundwater extraction waste discharges of less than 100,000 GPD where the extracted groundwater contains pollutants in excess of the limitations contained in Discharge Specification B.1, B.2, B.3, or B.4 of this Order, or which have the potential to cause a pollution, contamination, or nuisance in the receiving water or other waters downstream of the discharge point.

3. Discharges must meet the following criteria to be covered under this Order:

   (a) Pollutant concentrations in the discharge shall not cause violation of any applicable water quality objective for the receiving waters, including discharge prohibitions;

   (b) The discharge shall not cause acute nor chronic toxicity in receiving waters.

4. Dischargers must submit an application for current discharges (not enrolled, but discharging) which meet the eligibility criteria (pursuant to the requirements in Sections F and G, below) to obtain authorization to discharge.

5. When an individual NPDES permit with more specific requirements for groundwater extraction waste discharges is issued to an Enrollee, the applicability of this Order to that Enrollee is automatically terminated on the effective date of the individual permit.

E. DISCHARGE REQUIREMENTS

The applicant shall submit an application to obtain authorization to discharge under this general NPDES permit in accordance with Section F, *Application Requirements,* below. If the discharge is eligible, the Regional Board shall notify the applicant that the discharge is authorized under the terms and conditions of this Order and issue an Enrollment Letter enrolling the applicant under this general permit. For new discharges, the discharge shall not commence until receipt of the Regional Board's Enrollment Letter.

Water main break and service break emergency repairs are to be reported ONLY if groundwater is encountered during the repair. For unforeseeable emergency repair where groundwater is encountered, which could not have been prevented or avoided by the exercise of due care or foresight, the discharger shall notify the Regional Board and submit reports in accordance with the following:

For Each Emergency Repair Where Groundwater is Encountered:

Notify the Regional Board within 24 hrs of each emergency repair on the Emergency Repair Report Form provided by the Regional Board (attached). Notifications may be made via fax at (858) 571-6972 or by e-mail to ghorw@rb9.swrcb.ca.gov, or philj@rb9swrcb.ca.gov. Additional information may be reported by phone at (858) 467-2952. The report form shall be filled out completely and indicate if the discharge posed a threat to the environment or human health.

Quarterly Summary Reporting of Emergency Repairs Where Groundwater is Encountered:

Submit quarterly summary reports to the Regional Board for the periods of January-March, April-June, July-September, and October-December; the reports shall be submitted by the 30th of the month following the report period (April 30, July 30, Oct 30 and Jan 30, respectively). Quarterly Summary Reports shall contain all emergency repairs that occurred during the reporting period. For each individual emergency repair the report shall contain information in accordance with Emergency Repair Report Form. The quarterly summary shall include map(s) clearly marking the locations of all emergency repairs that occurred during the report period. Each quarterly report shall include analytical results from the groundwater samples taken during emergency repairs. No more than four sampling events per quarter are required.

Samples collected shall be analyzed for the following constituents:

- Total Suspended Solids
- Settleable Solids
- Turbidity
- pH
- BTEX
- TPH
- MTBE
- Heavy Metals

After 1 year, the data will be reviewed by the Regional Board to determine if Order No. 2001-96 requires amendment in order to more appropriately regulate emergency repairs.

Emergency repair discharges are not subject to application or annual fees.

F. APPLICATION REQUIREMENTS

1. Deadline for Submission

New applicants shall file a complete application at least 60 days before the planned commencement of the discharge.

2. Forms for Report of Waste Discharge

   a. Applicants shall use forms supplied by the Regional Board (attached).

   b. The applicant, upon request, shall submit any additional information that the Regional Board deems necessary to determine whether the discharge meets the criteria for coverage under this Order, and/or in prescribing an appropriate monitoring and reporting program.

   c. The application shall be accompanied by the first annual fee of $1,000.00. The check or money order shall be made payable to the "State Water Resources Control Board."

In order to obtain authorization to discharge under the terms and conditions of this Order, the applicant shall submit an application on forms provided by the Regional Board and in accordance with directions specified by the Regional Board. **The application must include the following information and materials:**

1. Project type: remediation, construction, foundation, temporary, or permanent.

2. Project address/location. Include a map illustrating the project location, discharge points, receiving waters, and Hydrologic Subarea numbers.

3. Number of groundwater extraction sites, or wells. Depth to groundwater in each well. Distances between the wells or sites. (If this is an alignment project (i.e.: pipeline) set sample points no further than 1000 feet apart.

4. Estimated maximum discharge flowrate(s) (GPD).

5. Estimated duration of discharge event(s). Indicate whether the discharge(s) will be one time, short term intermittent (less than 60 days), long term intermittent (greater than 60 days), permanent continuous, or permanent intermittent.

6. Proposed location(s) of discharge event(s) points, and name of receiving water(s). State whether the discharge(s) will be via a storm drain system, or directly into the receiving water. If the discharge is directly into the receiving water, state if it will be submerged or on the surface. List & illustrate all discharge points. If the receiving water is an inland surface water (fresh water) that is tributary to a saline water body, state the distance from the discharge point to the saline water, and whether there is any tidal influence (measurable salinity) at the point of discharge.

7. Location and description of storm drain(s) or conveyance system(s) used to convey the discharge to surface waters.

8. Name of public agency or entity having jurisdiction of storm drain(s) or conveyance

system(s) used to discharge to surface waters within the San Diego Region. Proof of notification to the public agency or entity responsible for the storm drain(s) or conveyance system(s) used to convey the proposed discharge to surface waters.

9. Proposed groundwater extraction start date for each extraction site.

10. Radius of influence (also known as the "cone of influence") assessment. An estimate or calculation of the radius of drawdown from the groundwater extraction pumping point.

11. Description of all known contamination within the radius of influence.

12. Detailed historical land use report.

13. Site Assessment (if a site assessment has been done).

14. Proximity of discharge location to Areas of Special Biological Significance (ASBS). ASBS's are Heisler Park Ecological Reserve located in coastal waters near the City of Laguna Beach; the San Diego-La Jolla Ecological Reserve; and the San Diego Marine Life Refuge, located in coastal waters near La Jolla, a community of the City of San Diego.

15. Proposed treatment processes, including chemicals to be used for biofouling control.

16. Best Management Practices (BMP's) and contingency plan (for leaks, spills, and process treatment system failures).

17. Statement of the potential uses of the extracted groundwater and compliance with Article X, Section 2, of the California Constitution. An example of a potential use is dust control. The application shall include a feasibility study on reuse and/or alternative disposal methods of the water. Examples of alternative methods of disposal are reinjection, percolation into the ground, use for dust control, or irrigation.

18. Statement of the potential for disposal to alternative receiving waters. Examples of alternative methods of disposal are reinjection and percolation into the ground.

19. Statement of compliance with 40 CFR 131.12 and SWRCB Resolution No. 68-16 (collectively Antidegradation Policies).

20. Results of analyses of the groundwater to be extracted for all of the constituents listed in Discharge Specification B.1, B.2, B.3, or B.4 (depending upon the receiving water) of this Order, as well as all 126 CTR constituents (Attachment D).

21. Signed Certification of Compliance statement on responsible party (owners) letterhead. This is to be signed and submitted by the project owner. Certifications by consultants and contractors are not valid and will not be accepted.

22. The application shall be accompanied by the first annual fee of $1000.00. The check or money order shall be made payable to the "State Water Resources Control Board."

G. PROVISIONS

1. Neither the treatment nor the discharge of wastes shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.

2. The Enrollee must comply with all conditions of this Order and the Enrollment Letter from the Regional Board. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action or for Enrollment Letter termination or modification.

3. The Enrollee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order or the Enrollment Letter, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.

4. This Order, and the Enrollment Letter, may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

   a. Violation of any terms or conditions of this Order or the Enrollment Letter;

   b. Obtaining coverage under this Order or the Enrollment Letter, by misrepresentation or failure to disclose fully all relevant facts;

   c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or

   d. A finding that monitoring "indicator" pollutants listed in this Order do not ensure compliance with water quality criteria or objectives for the pollutants expected to be represented by the "indicator" pollutants.

   e. On the basis of any data, the Regional Board determines that continued discharges may cause unreasonable degradation of the aquatic environment.

5. The filing of a request by the Enrollee for modification, revocation and re-issuance, or termination of this Order or the associated Enrollment Letter, or a notification of planned change in or anticipated noncompliance with this Order or Enrollment Letter, does not stay any condition of this Order or the Enrollment Letter.

6. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Board may initiate proceedings under these regulations to modify or revoke and reissue this Order to conform to the toxic effluent standard or prohibition.

7. The Regional Board, or the Director of the U.S. EPA, may require any person requesting authorization to discharge under this general permit or authorized to discharge under this general permit to apply for and obtain an individual NPDES permit. Cases where an individual NPDES permit may be required include, but are not limited to, those described in 40 CFR 122.28 (b)(3)(i) for U.S. EPA issued permits only.

8. An authorized discharge, either separately or jointly with any other discharge, shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the SWRCB as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act or amendments thereto, the Regional Board will revise and modify this Order in accordance with the more stringent standards.

9. The Enrollee shall comply with effluent standards or prohibitions established under Section 307(a) of the Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement.

10. This Order, and the Enrollment Letter, is not transferable to any person except after notice to the Regional Board. The Regional Board requires the Enrollee to submit a transfer of ownership/responsibility in writing prior to the transmittal of a new Enrollment Letter to change the name of the Enrollee and incorporate such other requirements as may be necessary under the California Water Code and the Clean Water Act. The Enrollee shall submit notice of any transfer of this Order's responsibility and coverage to a new Enrollee as described under Reporting Requirement H.3.

11. This Order, and the Enrollment Letter, does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property of another, including property damage caused as a result of the migration of groundwater contaminant plumes, nor protect the Enrollee from liabilities under federal, state, or local laws, nor create a vested right for the Enrollee to continue its waste discharge.

12. The Enrollee shall allow the Regional Board, or an authorized representative, or any representative of the USEPA, upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operation regulated or required under this Order; and

d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the Clean Water Act or California Water Code, any substances or parameters at any location.

13. The Enrollee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Enrollee to achieve compliance with the conditions of this Order or the Enrollment Letter. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order or the Enrollment Letter.

14. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass Not Exceeding Effluent Limitations

The Enrollee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operations. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

c. Notice of Anticipated Bypass and Unanticipated Bypass

(1) Anticipated bypass. If the Enrollee knows in advance of the need for a bypass they shall submit prior notice, if possible, at least ten days before the date of the bypass.

(2) Unanticipated bypass. The Enrollee shall submit notice of an unanticipated bypass as described under Reporting Requirement H.5.

d. Prohibition of Bypass

(1) Bypass is prohibited and the Regional Board may take enforcement action against the Enrollee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or

severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the Enrollee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment down time or preventative maintenance; and

(c) The Enrollee submitted notices as required under paragraph c of this Section.

(2) The Regional Board may approve an anticipated bypass after considering its adverse effect, if the Regional Board determines that it will meet the three conditions listed above in sections D.1a, D.1b, and D.1c of this section.

15. Upset Condition

a. Definitions

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the Enrollee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph c of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions Necessary for a Demonstration of Upset

An Enrollee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the Enrollee can identify the specific cause(s) of the upset;

(2) The permitted facility was at the time being properly operated; and

(3) The Enrollee submitted notice of the upset as required in Reporting Requirement H.5.

d. Burden of Proof

In any enforcement proceeding the Enrollee seeking to establish the occurrence of an upset has the burden of proof.

16. It shall not be a defense for the Enrollee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order or the Enrollment Letter. Upon reduction, loss, or failure of the treatment facility, the Enrollee shall, to the extent necessary to maintain compliance with this Order or the Enrollment Letter, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost.

17. It shall not be a defense for the Enrollee in an enforcement action that effluent limitation violations are a result of analytical variability rendering the results inaccurate. The validity of the testing results, whether or not the Enrollee has monitored or sampled more frequently than required by this Order, shall not be a defense to an enforcement action.

18. A copy of this Order and the Enrollment Letter shall be posted at a prominent location at the Enrollee's facility, and shall be available to operating personnel at all times.

19. The provisions of this Order and the Enrollment Letter are severable. If any provision of this Order and Enrollment Letter, or the application of any provision of this Order and Enrollment Letter to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order and Enrollment Letter, shall not be affected thereby.

20. The Enrollee shall take all reasonable steps to minimize or prevent any discharge in violation of this Order which has a reasonable likelihood of adversely affecting human health or the environment.

21. The Enrollee will be required to comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements, which have been or may be adopted by this Regional Board.

22. The 6-month median effluent concentration limit shall apply as a moving median of daily values for any 180-day period in which daily values represent flow-weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

23. The 30-day average shall be the arithmetic mean, using the results of analyses of all samples collected during any 30 consecutive day period.

24. The daily maximum effluent concentration limitation shall apply to flow weighted 24-hour composite samples, or grab samples if the duration of the discharge is less than 24 hours.

25. The instantaneous maximum effluent concentration limit shall apply to grab sample

determinations.

26. If only one sample is collected during the time period associated with the effluent limitations (e.g., 30-day average or 6-month median), the single measurement shall be used to determine compliance with the average or median effluent limitation for the entire time period.

27. All analytical data shall be reported uncensored with detection limits and quantitation limits identified. For any effluent limitation, compliance shall be determined using appropriate statistical methods to evaluate multiple samples. Sufficient sampling and analysis shall be conducted to determine compliance.

28. Pursuant to 40 CFR 131.38, the discharger shall report with each sample results subject to the CTR Requirements:

    a. The applicable *Minimum Level (ML) in accordance with section 2.4.2, or established in accordance with section 2.4.3 of 40 CFR 131.38; this ML is the "reported ML"; and

    b. The laboratory's current *Method Detection Limit (MDL), as determined by the procedure found in 40 CFR 136.

29. Pursuant to 40 CFR 131.38, the discharger shall report the results of analytical determinations for the presence of chemical constituents in a samples subject to CTR requirements using the following reporting protocols:

    a. Sample results greater than or equal to the reported Minimum Level (ML) shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

    b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The *estimated chemical concentration of the sample shall also be reported.

       For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words, "Estimated Concentration" (may be shortened to ("Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+/- a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

    c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

30. Compliance based on a single sample analysis should be determined where appropriate as described below for samples not subject to CTR requirements.

    a. When a calculated effluent limitation is greater than or equal to the PQL (defined below), compliance shall be determined based on the calculated effluent limitation

and either single or multiple sample analyses.

b. When the calculated effluent limitation is below the PQL, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL.

c. When the calculated effluent limitation is below the PQL and recurrent analytical responses between the PQL and the calculated limit occur, compliance shall be determined by statistical analysis of multiple samples.

31. Published values for MDLs (defined below) and PQLs should be used for samples not subject to CTR requirements, except where revised MDLs and PQLs are available from recent laboratory performance evaluations, in which case the revised MDLs and PQLs should be used. Where published values are not available, the Regional Board will determine appropriate values based on available information, including information submitted by the Enrollee upon request of the Regional Board.

a. The Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136, Attachment B.

b. The PQL is the lowest concentration of a substance which can be consistently determined within +/-20% of the true concentration by 75% of the labs tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL for carcinogens is the MDL x 5, and for non-carcinogens is the MDL x 10.

32. When determining compliance based on a single sample, with a single effluent limitation which applies to a group of chemicals (e.g. PCBs), concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the MDL for that parameter.

33. The mass emission rate (MER), in pounds per day, shall be obtained from the following calculation for any calendar day:

$$\text{mass emission rate (lb/day)} = 8.34 \times Q \times C$$

in which Q is the flow rate in MGD and C is the constituent concentration in mg/L, and 8.34 is a conversion factor. If a composite sample is taken, then C is the constituent concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited. Mass loading effluent limitations for a specific pollutant may be calculated using the authorized flowrate (in MGD) as the flow rate "Q" and the pollutant concentration limitation contained in Discharge Specification No. B.1, B.2, B.3, or B.4 as the constituent concentration "C" in the above equation.

34. Compliance with the Acute Toxicity limitation in Section B.1, B.2, B.3, or B.4, *Discharge Specifications*, of this Order shall be determined using an established protocol, e.g., American Society for Testing Materials (ASTM), USEPA, American Public Health Association, or SWRCB.

Acute Toxicity (TUa) shall be expressed in Toxic Units Acute (TUa), where:

$$TUa = \frac{\log (100 - S)}{1.7}$$

where S is the percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

Acceptable test species for fresh water samples are: Vertebrate (Fish) = fathead minnow.

35. Compliance with the Chronic Toxicity effluent limitation established in Discharge Specification No. B.1, B.2, B.3, or B.4, of this Order, shall be determined using critical life stage toxicity tests. Chronic Toxicity (TUc) shall be expressed as Toxic Units Chronic (TUc), where:

$$TUc = 100/NOEL$$

where NOEL is the No Observed Effect Level and is expressed as the maximum percent of effluent that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed below.

A minimum of three test species with approved test protocols shall be used to measure compliance with the chronic toxicity objective. The test species shall include a fish, an invertebrate, and an aquatic plant.

Acceptable test species for fresh water samples are: Vertebrate (Fish) = fathead minnow; Invertebrate = water flea; Plant = algae.

The following tests shall be used to measure TUc for salt-water samples:

Species	Effect	Tier	Reference
Giant kelp, Macrocystis Pyrifera	percent germination; germ tube length	1	Ocean Plan, pg. 24
Red abalone, Haliotis Plan,rufescens	abnormal shell development	1	Ocean pg. 24
Oyster, Crassostrea gigas; mussels, Mytilus spp.	abnormal shell development; percent survival	1	Ocean Plan, pg. 24
Urchin, Strongylocentrotus purpuratus; sand dollar, Dendraster excentricus	percent normal development	1	Ocean Plan, pg. 24

Species	Effect	Tier	Reference
Urchin, Strongylocentrotus Purpuratus; sand dollar, Dendraster excentricus	percent fertilization	1	Ocean Plan, pg. 24
Shrimp, Holmesimysis costata	percent survival; growth	1	Ocean Plan, pg. 24
Shrimp, Mysidopsis bahia	percent survival; growth; fecundity	2	Ocean Plan, pg. 24
Topsmelt, Atherinops affinis	larval growth rate; percent survival	1	Ocean Plan, pg. 24
Silversides, Menidia beryllina	larval growth rate; percent survival	2	Ocean Plan, pg. 24

Note: The first tier test methods are the preferred toxicity tests for compliance monitoring. A Regional Board can approve the use of a second tier test method for waste discharges if first tier organisms are not available.

After a screening period, to be determined on a case by case basis by the Regional Board, monitoring may be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

36. No later than six months after authorization to discharge under this Order, all permanent groundwater extraction waste discharge Enrollees shall develop a Toxicity Reduction Evaluation (TRE) workplan in accordance with USEPA's Toxicity Reduction Evaluation Procedures: Phases 1, 2, and 3, (USEPA document Nos. USEPA 600/3-88/034, 600/3-88/035 and 600/3-88/036, respectively), and TRE Protocol for Municipal Wastewater Treatment Plants (USEPA 600/2-88/062). The TRE workplan shall be subject to the approval of the Regional Board and shall be modified as directed by the Regional Board. All Enrollees shall submit the TRE workplan to the Regional Board upon completion. Submittal of the TRE workplan on a IBM formatted double sided high density 3.5" floppy disk in Word 7.0 format is acceptable.

If toxicity testing results show a violation of any acute or chronic toxicity limitation identified in Discharge Specification B.1, B.2, B.3, or B.4 of this Order, the Enrollee shall:

a. Take all reasonable measures necessary to immediately minimize toxicity; and

b. Increase the frequency of the toxicity test(s) which showed a violation to at least two times per month until the results of at least two consecutive toxicity tests do not show violations.

If the Regional Board determines that toxicity testing shows consistent violation of any acute or chronic toxicity limitation identified in Discharge Specification B.1, B.2, B.3, or B.4 of this

Order, the Enrollee shall conduct a TRE which includes all reasonable steps to identify the source of toxicity. Once the source of toxicity is identified, the Enrollee shall take all reasonable steps to reduce the toxicity to meet the toxicity limitations identified in Discharge Specification B.1, B.2, B.3, or B.4 of this Order.

Within fourteen days of completion of the TRE, the Enrollee shall submit the results of the TRE, including a summary of the findings, data generated, a list of corrective actions necessary to achieve consistent compliance with all the toxicity limitations of this Order and prevent recurrence of violations of those limitations, and a time schedule for implementation of such corrective actions. The corrective actions and time schedule shall be modified at the direction of the Executive Officer.

37. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 MPN (most probable number). The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for coliforms (total and fecal) shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Regional Board (and approved by USEPA) to be appropriate. Detection methods used for enterococcus shall be those presented in USEPA publication USEPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure or any improved method determined by the Regional Board to be appropriate.

38. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

$$\text{Geometric Mean} = (C_1 \times C_2 \times \ldots \times C_n)^{1/n}$$

Where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL) found on each day of sampling.

39. As used in this Order, waste includes an Enrollee's total discharge of whatever origin (i.e. gross, not net) discharge.

40. Reduction of natural light may be determined by the Regional Board by measurement of light transmissivity, total irradiance, or both, according to the monitoring needs of the Regional Board.

H. REPORTING REQUIREMENTS

1. The Enrollee shall file a new application not less than 180 days prior to the following:

   a. Addition of any industrial waste to the discharge or the addition of a new process or product resulting in a change in the character of the wastes.

   b. Significant change in disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste).

c. Significant change in disposal area (e.g., moving the discharge to a disposal area significantly removed from the original area, potentially causing different water quality or nuisance problems).

d. Increase in flow beyond that specified in the Enrollee's Enrollment Letter.

e. Other circumstances which result in a material change in character, amount, or location of the waste discharge.

f. Any planned physical alterations or additions to the permitted discharge and/or facility.

2. The Enrollee shall give advance notice to the Regional Board of any planned changes in the permitted discharge and/or facility or activity which may result in noncompliance with the requirements of this Order or the Enrollment Letter.

3. The Enrollee must notify the Regional Board, in writing, at least 30 days in advance of any proposed transfer of authorization and responsibility for compliance with this order to a new Enrollee. The notice must include a written agreement between the existing and new Enrollee containing a specific date for the transfer of authorization responsibility and coverage between the current Enrollee and the new Enrollee. This agreement shall include an acknowledgement that the existing Enrollee is liable for violations up to the transfer date and that the new Enrollee is liable from the transfer date on.

4. The Enrollee shall comply with the attached Monitoring and Reporting Program No. 2001-96 and any additional monitoring requirements specified by the Regional Board. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 2001-96. The sampling and analysis schedule in the attached monitoring program must be followed, as well as any additional or augmented monitoring requirements specified in the Enrollment Letter. If requested by the Enrollee, the monitoring program may be modified or reduced by the Regional Board after review of results from not less than four sampling events with a sampling frequency of not less than monthly. If the groundwater extraction and/or treatment system(s) described in the application is modified, the schedule of applicable monitoring specified in Monitoring and Reporting Program No. 2001-96, or the Enrollment Letter, will be reviewed for possible modification.

5. The Enrollee shall report any noncompliance, which may endanger health or the environment. Any information shall be provided orally to the Regional Board within 24 hours from the time the Enrollee becomes aware of the circumstances. The Enrollee shall submit a written report containing a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The written report shall be included with the monitoring report for the period in which the noncompliance occurred, or earlier if requested by the Regional Board. The following occurrence(s) must be reported to the Regional Board within 24 hours:

a. Any upset which causes the effluent limitations of this Order to be exceeded;

b. Any unanticipated bypass which causes the effluent limits of this Order to be exceeded;

c. Violation of a daily maximum effluent limitation, or instantaneous maximum effluent limitation, if a grab sample is obtained, as specified in this Order excluding violations of settleable solids, total suspended solids, turbidity, phosphorus, and nitrogen (provided that nitrate-nitrogen does not exceed 10 mg/L); and

d. Any violation of the prohibitions of this Order or an Enrollment Letter.

6. Enrollees applying for enrollment under this Order shall notify the Agency/Municipality that owns, operates, and maintains the storm water conveyance system that the Enrollee proposes to use the storm water conveyance system as a discharge conveyance system to a surface water.

7. The Enrollee shall notify the Regional Board as soon as it is known or there is reason to believe:

a. That any activity has occurred or will occur which will result in the discharge of any toxic pollutant which is not limited in this Order, if that discharge will exceed the highest of the following "notification levels":

1. One hundred micrograms per liter (100 μg/L);

2. Two hundred micrograms per liter (200 μg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/L) for 2.4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.

8. The Enrollee shall furnish to the Regional Board, within a reasonable time, any information which the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or the Enrollment Letter, or to determine compliance with this Order or other requirements established by the Regional Board. The Enrollee shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order or the Enrollment Letter.

9. The Enrollee shall provide adequate notice to the Regional Board of the following:

a. Any new introduction of pollutants to the discharge (i.e.: chlorine).

b. Any substantial change in the volume or character of pollutants being introduced into the discharge.

c. For the purpose of this provision, adequate notice shall include information on:

(1) The quality and quantity of pollutants introduced into the discharge, and

(2) Any anticipated impact of the change on the quantity or quality of effluent to be discharged to the receiving water.

10. Where the Enrollee becomes aware that it failed to submit any relevant facts in an application, or submitted incorrect information in an application, or in any report to the Regional Board, it shall promptly submit such facts or information.

11. If a need for a discharge bypass is known in advance, the Enrollee shall submit prior notice and, if at all possible, such notice shall be submitted at least ten days prior to the date of the bypass.

12. This Order expires on September 14, 2006. However, it will continue in force and effect until a new general permit is issued or the Regional Board rescinds this general permit.

13. All applications, reports, or information submitted to the Regional Board shall be signed and certified.

    a. The application and certification report shall be signed as follows:

        1. For a corporation - by a principal executive officer of at least the level of vice-president.

        2. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.

        3. For a municipality, state, federal, or other public agency - by either a principal executive officer or ranking elected official.

    b. All other reports required by this Order and other information requested by the Regional Board shall be signed by a person designated in paragraph (a) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:

        1. The authorization is made in writing by a person described in paragraph (a) of this provision;

        2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, or position of equivalent responsibility (a duly authorized representative may be either a named individual or any individual occupying a named position); and

        3. The written authorization is submitted to the Regional Board.

    c. Any person signing a document under this Section shall make the following certification:

        "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information

submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

14. Except for data determined to be confidential under Title 40, Code of Federal Regulations Part 2 (40 CFR Part 2), all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the California Regional Water Quality Control Board, San Diego Region and the USEPA, Region 9. As required by the Clean Water Act, applications, this Order, and effluent data shall not be considered confidential.

15. Where a Categorical Exception pursuant to Section 5.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Policy) is requested, the discharger shall notify potentially affected public and governmental agencies. Also, the discharger shall submit to the Regional Board, for approval:

    a. A detailed description of the proposed action, including the proposed method of completing the action;

    b. A time schedule;

    c. A discharge and receiving water quality monitoring plan (before project initiation, during the project, and after project completion, with the appropriate quality assurance and quality control procedures);

    d. California Environmental Quality Action (CEQA) documentation;

    e. Contingency plans;

    f. Identification of alternate water supply (if needed);

    g. Residual waste disposal plans; and

    h. Upon completion of the project, the discharger shall provide certification by a qualified biologist that the receiving water beneficial uses have been restored.

16. The Enrollee shall submit written notification of the termination of the discharge to the Regional Board within 30 days of the termination of the discharge.

17. The Enrollee shall submit applications and reports required under this Order to:

    Industrial Compliance Unit
    California Regional Water Quality Control Board
    San Diego Region
    9771 Clairemont Mesa Blvd, Suite A
    San Diego, California 92124-1324

I. NOTIFICATIONS

1. California Water Code Section 13263(g) states:

   "No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights."

2. The Clean Water Act provides that any person who violates a condition of this Order implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a civil penalty not to exceed $10,000 per day of such violations. Any person who willfully or negligently violates conditions of this Order implementing Section 301, 302, 306, 307 or 308 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.

3. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

4. Nothing in this Order shall be construed to relieve the Enrollee from civil or criminal penalties for noncompliance.

5. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Enrollee from any responsibilities, liabilities, or penalties to which the Enrollee is or may be subject to under Section 311 of the Clean Water Act.

6. Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Enrollee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

7. This Order shall become effective 10 days after the date of its adoption, provided the Regional Administrator or Director, USEPA, has no objection. If the Regional Administrator or Director objects to its issuance, this Order shall not become effective until such objection is withdrawn.

8. If the *Water Quality Control Policy for Enclosed Bays and Estuaries of California* (May 16, 1974) is revised, this Order may be modified to incorporate such revisions. If a Water Quality Control Plan for Enclosed Bays and Estuaries of California is adopted, this Order may be modified to implement such a plan.

9. This Order supersedes Order No. 96-41, and Order No. 96-41 is rescinded when this Order takes effect.

10. Once enrolled under this Order, the Enrollee shall be subject to an annual fee of $1000.00. The check or money order shall be submitted with the application, and made payable to the "State Water Resources Control Board."

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Control Board, San Diego Region, on September 14, 2001.

TENTATIVE

JOHN H. ROBERTUS
EXECUTIVE OFFICER

ENDNOTE REFERENCES

1. "Enclosed bays" include all bays where the narrowest distance between headlands or outer most harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay.

2. BAT = "Best available technology economically achievable" refers to the best treatment technologies available which have been determined to be cost effective, reliable, and efficient by the USEPA, SWRCB, or the Regional Water Quality Control Board.

3. 40 CFR 122.4(d)(1)(vii) requires that if indicator monitoring parameters are used, the following four provisions must be fulfilled:

   a) The permit identifies which pollutants are intended to be controlled by use of the indicator effluent limitations,

   b) The fact sheet sets forth the basis for each indicator chemical's effluent concentration limitation and includes a finding that compliance with the limit on the indicator constituent will result in controls on the pollutant(s) of concern which are sufficient to attain and maintain water quality standards,

   c) Effluent and receiving water quality monitoring to show the limit on the indicator parameter attains and maintains applicable water quality standards, and

   d) The permit contains a re-opener clause.

   e) Each of the preceding conditions for inclusion of indicator parameter monitoring has been addressed in this Order, the attached Monitoring and Reporting Program, the Enrollment Letter from the Regional Board, or the Fact Sheet for this Order.

4. Leaking Underground Storage Tank Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, State of California, Leaking Underground Fuel Tank Task Force, May 1988.

5. Diesel fuel consists primarily of straight-chain hydrocarbons (alkenes and alkanes) ranging in length from C10 to C23 with C16 and C17 predominating. The C10-C30 straight-chain hydrocarbons can be quantified in groundwater using standard analytical techniques (e.g. California Department of Health Services recommended analytical procedure for total petroleum hydrocarbons - diesel, (LUFT Manual: Guidelines for site Assessment, Cleanup, and Underground Storage Tank Closure, October 1989 base/neutral organic analytical techniques contained in 40CFR 136). Since the predominant components of diesel fuel are the straight-chain hydrocarbons, the total petroleum hydrocarbon - diesel standard testing method contained in the LUFT Manual is used as the indicator of diesel fuel-contaminated groundwaters. Groundwater gasoline remediation projects may use standard TPH methods.

   The "indicator" compounds to detect common industrial solvents are the volatile organic compounds listed in 40 CFR 136.

6. NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document (Draft), USEPA, Water Management Division, July 1986.

7. After receipt of an application report as required by Section F, *Application Requirements* of Tentative Order No. 2001-96, the Regional Board may:

   a) Determine that the proposed discharge is subject to regulation by Tentative Order No. 2001-96,

   b) Determine that the proposed discharge is not subject to regulation by Tentative Order No. 2001-96, or

c) Request additional information in order to determine if the discharge is subject to regulation by Tentative Order No. 2001-96.

If the Regional Board determines that the proposed discharge is subject to regulation by Tentative Order No. 2001-96, an "Enrollment Letter" will be issued to the Enrollee authorizing the discharge, subject to the terms and conditions of Tentative Order No. 2001-96 and any other conditions necessary to protect the beneficial uses of surface waters within the San Diego Region. The Enrollment Letter will also specify the maximum allowed discharge flowrate (which also limits the mass loading rate for each pollutant listed in Discharge Specification Nos. B.1, B.2, B.3, and B.4 of Tentative Order No. 2001-96) and any additional monitoring and reporting requirements not covered by Monitoring and Reporting Program No. 2001-96. Enrollment Letters issued by the Regional Board for discharges from groundwater remediation operations shall specify effluent limits and monitoring requirements for the constituents necessitating remediation. If the Regional Board does not issue an Enrollment letter for a discharge under the terms and conditions of Tentative Order No. 2001-96, the discharge of groundwater extraction waste to surface waters within the San Diego Region other than San Diego Bay is prohibited.

8. The effluent limitations for Ocean Plan Table B constituents for groundwater extraction waste discharges to bays and estuaries were determined by using an initial dilution factor of zero and applying the calculations and procedures found in the Water Quality Control Plan, Ocean Waters of California, 1997 (Ocean Plan). Except for volatile and base/neutral extractable compounds, in which case concentrations achievable using best available technology economically achievable (BAT) were taken into consideration, where lower than Table B-based effluent limitations can be achieved using BAT, BAT is the basis for the lower effluent limit.

The effluent limitations for Ocean Plan Table B constituents for groundwater extraction waste discharges to the surf zone were determined by using an initial dilution factor of three and applying the volatile and base/neutral compounds in the case that BAT is able to reduce the constituent to a lower concentration. The use of dilution factor of three for discharges to surf zones is based on a preliminary dilution model submitted by Professor Gerhard H. Jirka, School of Civil and Environmental Engineering, Cornell University, for a dewatering project for the international treatment facility ocean outfall near Tijuana. This particular model assumes that:

a) Mixing of the dewatering is primarily controlled by wave-induced turbulence and longshore conditions,

b) 0.55 meter wave height with a 15 second period occurring with a 95 percent exceedance probability,

c) A longshore velocity of 5 to 10 centimeters per second, and

d) A near-shore slope of 3 percent.

The model results in an initial dilution ratio of 6. Since the model does not represent topographic and wave conditions throughout the Region, the initial dilution factor for discharges to surf zones was halved.

The effluent limitations for volatile and base/neutral organics not limited by standard criteria or objectives (e.g., Ocean Plan, USEPA criteria, etc.) are based on best professional judgement of the best available technology economically achievable (BAT) for the removal of volatile and semivolatile organic compounds from groundwater (reference is made to NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document (Draft), USEPA, Water Management Division, July 1986) and the practical quantitation level (PQL) for each compound. Effluent limitations for settleable solids, total suspended solids, nitrogen, phosphorus, turbidity, dissolved oxygen, and acute toxicity are based on best professional judgement.

Effluent limitations for toxic pollutants which may be present in groundwater extraction waste discharges to inland surface waters designated municipal or potable supply are based on:

a) the USEPA criteria for the protection of aquatic species,

b) the California Department of Health Service's Maximum Contaminant Level (MCL) for potable water, or

c) Achievable effluent concentrations using best available technology (BAT).

Effluent limitations for discharges to inland surface waters which have not been designated as having a beneficial use of municipal or potable supply are based on the following:

a) The USEPA criteria for the protection of aquatic species,

b) The USEPA criteria for the protection of human health from consumption of aquatic species, or

c) Achievable effluent concentrations using best available technology (BAT).

Effluent limitations for the protection of human health from the ingestion of carcinogens are based on the EPA criteria which may result in an incremental cancer risk over the lifetime of 10^{-6}.

Where effluent concentration limitations in this Order are less than Methods Detection Limits (MDL) contained in 40 CFR 136, or other analytical detection levels approved by the Regional Board, compliance with effluent limitations will be assumed if the effluent concentration is less than the MDL or PQLs contained in the approved analytical methods unless more definitive (sensitive) analytical methods are requested by the Regional Board. If sample matrix interferences, or other interferences result in analytical detection levels less sensitive than those listed in 40 CFR 136, or other methods approved by the Regional Board, such interferences shall be documented by the laboratory performing the analyses.

9. The "Basis" for each numerical effluent pollutant concentration limit necessary to protect the beneficial uses of receiving waters was derived or obtained from the source indicated in Discharge Specifications B.1 through B.4. Abbreviations listed in the table are explained in footnote reference Nos. 10, 11, 13, 19, 21, and 22 below.

10. "BPJ" = Best Professional Judgement. The application of best professional judgement in establishing effluent limitations is authorized by 40 CFR 125.3. The establishment of BPJ effluent limitations is based on the following:

a) review of effluent limitations for similar operations which discharge wastes to enclosed bays or other receiving waters in the State of California,

b) Compliance with general narrative water quality objectives as required in the Comprehensive Water Quality Control Plan, San Diego Basin (9) (Basin Plan),

c) Review of technical support documents, *Quality Criteria for Water*, United States Environmental Protection Agency, if available, for suggested criteria for the protection of aquatic life,

d) Water Quality Control Plan, Ocean Waters of California, 1997, and

e) Water Quality Control Policy for Enclosed Bays and Estuaries of California (May 16, 1974).

11. “OP” = Ocean Plan. Effluent limitations for Ocean Plan, Table B constituents are derived using a dilution factor of ‘zero’ for discharges to bays and estuaries, lagoons and harbors, inland surface waters and ‘three’ for discharges to the surf zone, and applying the calculations and procedures found in the Ocean Plan (Water Quality Control Plan, Ocean Waters of California, 1997). The effluent limitations for volatile organics (e.g., benzene, ethylbenzene, toluene, and xylene, etc.) are based on best professional judgement of the best available technology economically achievable (BAT) for the removal of volatile organic compounds from water (reference is made to NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document (Draft), U.S. Environmental Protection Agency, Water Management Division, July 1986) and the practical quantitation level for each compound. Effluent limitations for

settleable solids, total suspended solids, toxicity, hydrogen sulfide, and total petroleum hydrocarbons are based on best professional judgement.

12. Total Residual Chlorine: In samples obtained from marine, saline, or other waters containing bromine, total residual chlorine limitations shall apply to total residual oxidants (TRO). The effluent and receiving water quality limitations for chlorine are based on a continuous discharge. Effluent and receiving water quality limitations for total chlorine residual applying to intermittent chlorine discharges not exceeding two hours, shall be determined through the use of the following equation:

$$\log y = -0.33(\log x) + 2.1$$

where y = the effluent and receiving water quality limitation (in μg/L) to apply when chlorine is being discharged;
x = the duration of uninterrupted chlorine discharge in minutes.

13. "BPJ/BAT" = The best professional judgement of the best available technology economically achievable. The effluent limitations for volatile and semivolatile organic compounds are based on BPJ/BAT for the removal of organic constituents as authorized by Section 301(b)(2) of the Clean Water Act. The establishment of the BPJ/BAT effluent imitations is based on:

a) Economically achievable pollutant removal efficiencies of available treatment technologies,

b) Method detection limits (MDL) or practical quantitation levels (PQL) established for organic contaminants in waters,

c) The draft document *NPDES Permit Limitations For Discharge Of Contaminated Groundwater: Guidance Document For Volatile Petroleum Hydrocarbons*, prepared by Harold A. Ball and Kenneth H. Sutherland, USEPA, Water Management Division, July 1986,

d) *Leaking Underground Storage Tank Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure*, State of California, Leaking Underground Fuel Tank Task Force, May 1988,

e) *Final NPDES General Permit for Petroleum Fuel Contaminated Ground/Storm Water in the State of Florida*, Federal Register, July 17, 1989, and,

f) *Model NPDES Permit for Discharges Resulting From the Cleanup of Gasoline Released From Underground Storage Tanks*, USEPA, June 1989.

14. The hexavalent and trivalent chromium limits may be met as a total chromium limit. If analytical results for total chromium reveal a total chromium concentration greater than the effluent limitations for hexavalent chromium and the sample has not been analyzed for hexavalent chromium, it will be assumed that hexavalent chromium concentrations are in violation of the effluent limitation.

15. PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Arochlor-1016, Arochlor-1221, Arochlor-1232, Arochlor-1242, Arochlor-1248, Arochlor-1254, and Arochlor-1260.

16. "Base/Neutral organic compounds" are listed in 40 CFR 136. The instantaneous maximum effluent limitation of 10 μg/L for base/neutral compounds does not apply to pesticides.

17. Discharges to lagoons and estuaries consisting of freshwater shall comply with the effluent limitations for discharges to inland surface waters. Where questions arise concerning the salinity, or lack thereof, of a receiving water, the Regional Board shall determine which effluent limitation are applicable.

18. Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total phosphorus concentrations shall not exceed 0.05 mg/L in any stream at the point where it enters any standing body of water, nor 0.025 mg/L in any standing body of water. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/L total phosphorus. These values are not to exceed more than 10% of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ration of nitrogen: phosphorus = 10:1 shall be used.

19. "BP" = Basin Plan (Comprehensive Water Quality Control Plan, San Diego Basin (9).

20. Effluent limitations for discharges to the surf zone were obtained assuming an initial dilution factor of three and applying the calculations and procedures found in the Water Quality Control Plan, Ocean Waters of California, 1997, except in cases in which BAT can achieve lower effluent pollutant concentrations. BAT effluent limitations are applied at the "end-of-pipe" and dilution factors are not applicable.

21. Surface waters with municipal beneficial uses are identified in the Basin Plan.

22. DOHS = California Department of Health Services - Maximum Contaminant Levels for drinking water.

23. Degradation shall be determined by comparison of the waste field and reference site(s) for characteristics such as species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

24. Significant difference is defined as statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

25. Compliance with the water quality objectives shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is completed. Since the effluent limitations in this Order are based on an initial dilution factor of zero with the exception of discharges to the surf zone, compliance with the water quality objectives shall be met at all locations in the receiving water.

26. Kelp Beds are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp Beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

27. Initial dilution is the process which results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

    For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

    For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of the discharges.

28. Shellfish are organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e. mussels, clams, and oysters).

29. HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane

30. Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

31. Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, nonachlor-alpha, nonachlor, nonachlor-gamma, and oxychlordane.

32. DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

33. Halomethanes shall mean the sum of bromoform, bromomethane, (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.

34. Heptachlor shall mean the sum of heptachlor and heptachlor epoxide.

35. PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenapthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,1,2-indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

36. “Average Monthly Effluent Limitation”(AMEL) = The highest allowable average of daily pollutant discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of measurements.

37. The 30-day average shall be the arithmetic mean, using the results of analyses of all samples collected during any 30 consecutive calendar day period.

38. U.S. EPA approved methodology for the analysis of MTBE in water include methods 8020 and 8260B. Method 8020 yields "false positives" at times and is less accurate than method 8260B. Method 8260B is more accurate, therefore it is recommended that 8260B is used. If the enrollee chooses to use method 8020, and the analytical results show that MTBE was detected, then the enrollee shall run a second analysis for MTBE using method 8260B, in order to confirm the presence or absence of MTBE in the groundwater. The level of accuracy of a particular methodology shall not exempt an enrollee from the potential of enforcement action being taken due to exceedences of permit limits.

    County of San Diego, Dept. of Environmental Health, Site Assessment & Mitigation Program, January 20, 2000 SAM Manual, Section 5-Site Investigation Techniques, IX Lab Analysis, Table 5-4, states that EPA Method 8260B is required for MTBE analysis.

    State Water Resources Control Board letter dated April 13, 2000 to Regional Board's/Underground Storage Tank Program Managers and Local Oversight Program Managers, states that the appropriate analytical test method for MTBE is 8260.